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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,165	03/21/2001	Charles M. Leedom JR.	740301-414	1940

7590 03/29/2004  
Charles M. Leedom, Jr.  
6524 Truman Lane  
Falls Church, VA 22043

EXAMINER

CORSARO, NICK

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/813,165

Applicant(s)

LEEDOM, CHARLES M.

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2, 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under, 35 U.S.C. 119(e) as follows:

The priority to the provisional application must be mentioned in the first line of the disclosure.

Correction is required.

### *Drawings*

2. The application transmittal letter indicates that four drawing pages were filed. However, only three are in the application. Correction is required.

### *Claim Objections*

3. Claim 4 is objected to because of the following informalities: Claim 4 does not have proper punctuation. The claim ends with a comma and should end with a period. Appropriate correction is required.

### *Specification*

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "TIERED SERVICE MULTIPLE PROTOCOL WIRELESS COMMUNICATION SYSTEM".

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen et al. (6,128,490) in view of Kotzin et al. (5,974,319).

Consider claim 1, Shaheen discloses a wireless, multi-modal access device adapted to communicate over a plurality of communication networks operating in differing communication modes to facilitate transfer of a communication link during a communication session to promote efficient use of the communication networks (see col. 2 lines 65-67, col. 3 lines 1-40, col. 6 lines 1-15, col. 6 lines 25-56, and col. 8 lines 43-47, where Shaheen discusses overlaid system operating with different frequency bands and protocols). Shaheen discloses a radio transceiver capable of operating over at least two communication channels to allow a communication session to be established on one said channel by adopting a communication mode compatible with one of the plurality of communication networks to provide a communication link over said one channel using a communication mode compatible with said one communication network (see col. 5 lines 8-15, col. 6 lines 35-56, col. 8 lines 62-67, col. 9 lines 1-28, col. 9 lines 42-67, col. 8 lines 2-9, and col. 10 lines 1-33, where Shaheen discusses that the subscriber unit begins operating in the AMPS band). Shaheen discloses wirelessly communicating over a second said channel with another communication network using a communication mode compatible with said second communication network (see col. 8 lines 2-8, col. 8 lines 62-67, col. 9 lines 6 lines 4-

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15, col. 10 lines 1-33, col. 10, lines 35-67, and col. 12 lines 40-47, where Shaheen discusses the mobile began communicating on the AMPs channel and band, and subsequently switches to the PCS\_CDMA channel and band). Shaheen discloses an access device controller connected with said radio transceiver for causing the communication link established between said access device and said one communication network to be transferred to said second communication network during the communication session to allow the communication session to be continued over said second communication network (see col. 10 lines 1-67, col. 11 lines 1-50, and col. 12 lines 40-47, where Shaheen discusses a controller allowing the mobile to start on AMPS and switch to CDMA).

Shaheen does not specifically disclose simultaneous communication over at least two communication channels. Kotzin teaches simultaneous communication over at least two communication channels (see col. 5 lines 64-67, col. 6 lines 1-40, and col. 7 lines 30-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Shaheen, and simultaneously communication over at least two communication channels, as taught by Kotzin, thus allowing a soft handoff of communications between the system of different protocols, as discussed by Kotzin, (col. 2 lines 37-45, and col. 3 lines 30-37).

Consider claim 2, Shaheen discloses a communication system for integrating a plurality of wireless communication networks capable of independent operation to form an integrated communication grid (see col. 1 lines 65-67, col. 2 lines 1-25, col. 4 lines 65-67, col. 5 lines 1-40, col. 5 lines 55-67, col. 6 lines 1-24, and col. 6 lines 35-45 where Shaheen discusses many overlaid networks from service providers of different protocols and frequency bands). Shaheen

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discloses a plurality of wireless communication networks providing service to users in overlapping geographic areas, said service providers using different communication modes (see col. 6 lines 35-45, and col. 6 lines 1-24). Shaheen discloses a plurality of portable wireless, multi-modal access devices, each said access device being capable of operating in at least some of the plurality of communication modes compatible with said communication networks and being capable of establishing a communication session over a first communication link using any one of said communication networks while operating in a compatible communication mode (see col. 2 lines 65-67, col. 3 lines 1-19 and col. 6 lines 1-45). Shaheen discloses a system controller for communicating with any said access device during a communication session established over a communication link using one of said communication networks to cause the communication link to be transferred to a second one of said wireless communication networks having a geographic service area encompassing said access device by causing said access device to switch to a different, communication mode compatible with said second communication network during the communication session to allow the communication session to continue over said second communication network (see col. 6 lines 57-67, col. 7 lines 1-18, col. 7 lines 18-67, col. 8 lines 1-52, col. 9 lines 10-677, and col. 10 lines 1-65, where Shaheen discusses the units and the system work together to decide on a system, and protocol to use; the unit begins with one (AMP's) and switches to CDMA or PCS\_CDMA).

Shaheen does not specifically disclose to allow the session to continue. Kotzin teaches to allow the session to continue (see col. 5 lines 64-67, col. 6 lines 1-40, and col. 7 lines 30-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Shaheen, and allow the session to continue, as taught by Kotzin, thus

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allowing the unit to use the new system when necessary, as discussed by Kotzin, (col. 2 lines 37-45, and col. 3 lines 30-37).

Consider claim 3, Shaheen discloses an omni-compatible broadband connection gateway for providing wireless access to a plurality of communication services for a plurality of portable wireless access devices located within a geographic service area of the gateway and capable of operating in a plurality of different communication modes (see col. 1 lines 65-67, col. 2 lines 1-25, col. 4 lines 65-67, col. 5 lines 1-40, col. 5 lines 55-67, col. 6 lines 1-24, and col. 6 lines 35-45 where Shaheen discusses many overlaid networks from service providers of different protocols and frequency bands). Shaheen discloses a frequency agile and protocol agile radio transceiver capable of simultaneous wireless communication with a plurality of portable wireless access devices within the geographic service area of the gateway over a plurality of reassignable communication channels adapted to be assigned to those portable wireless access devices to which a communication service is supplied using a frequency and communication protocol compatible with the requirements of the portable wireless access device and compatible with the communication service being supplied (see col. 6 lines 35-45, col. 6 lines 1-24, see col. 2 lines 65-67, col. 3 lines 1-19, col. 6 lines 1-45, col. 9 lines 41-67, and col. 10 lines 1-65). Shaheen discloses an interface circuit for providing a broadband communication channel between said radio transceiver and all communication services being provided by the gateway to the portable wireless access devices operating within the geographic service area of the gateway (see col. 6 lines 35-67, where Shaheen discusses providing all types of systems and protocols along with later versions). Shaheen discloses a transceiver controller connected with said radio transceiver for causing said radio transceiver to assign an appropriate communication channel to each

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portable wireless access device to which a communication service is to be provided wherein the communication channel is selected by said controller to be compatible with the requirements of the communication service and the corresponding portable wireless access device (see col. 6 lines 35-67, 7 lines 1-40, col. 8 lines 9-51, and col. 9 lines 1-41). Shaheen discloses causing said radio transceiver to employ a communication protocol and to employ an appropriate frequency for wireless broadcast over each communication channel to allow all of the communication services to be supplied to the portable wireless access devices to be operated (see col. 9 lines 41-67 and col. 10 lines 1-65).

Shaheen does not specifically disclose one subscriber in simultaneous communication. Kotzin teaches one subscriber in simultaneous communication (see col. 5 lines 64-67, col. 6 lines 1-40, and col. 7 lines 30-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Shaheen, and have one subscriber in simultaneous communication, as taught by Kotzin, thus allowing a soft handoff of communications between the system of different protocols, as discussed by Kotzin, (col. 2 lines 37-45, and col. 3 lines 30-37).

Consider claim 6, Shaheen discloses a multi-channel gateway for providing wireless access to a plurality of communication services for a plurality of portable wireless access devices located within a geographic service area of the gateway (see col. 1 lines 65-67, col. 2 lines 1-25, col. 4 lines 65-67, col. 5 lines 1-40, col. 5 lines 55-67, col. 6 lines 1-24, and col. 6 lines 35-45 where Shaheen discusses many overlaid networks from service providers of different protocols and frequency bands). Shaheen discloses a multi-channel radio transceiver capable of simultaneous wireless communication with a plurality of portable wireless access devices within



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the geographic service area of the gateway over a plurality of re-assignable communication channels adapted to be assigned to those portable wireless access devices to which a communication service is supplied using a frequency and communication protocol compatible with the requirements of the portable wireless access device and compatible with the communication service being supplied (see col. 6 lines 35-45, col. 6 lines 1-24, see col. 2 lines 65-67, col. 3 lines 1-19, col. 6 lines 1-45, col. 9 lines 41-67, and col. 10 lines 1-65). Shaheen discloses an interface circuit for providing a service side communication channel between said radio transceiver and all communication services being provided by the gateway to the portable wireless access devices operating within the geographic service area of the gateway (see col. 6 lines 35-67, where Shaheen discusses providing all types of systems and protocols along with later versions). Shaheen discloses an inherent memory for storing a plurality of communication protocols appropriate for supplying the respective communication services accessible by said interface circuit for wireless broadcast over the respectively assigned communication channels (see col. 9 lines 41-67 and col. 10 lines 1-20, where Shaheen discloses a base station with stored protocols therefore, and inherent memory). Shaheen discloses a transceiver controller connected with said radio transceiver for causing said radio transceiver to assign an appropriate communication channel to each portable wireless access device to which a communication service is to be provided wherein the communication channel is selected by said controller to be compatible with the requirements of the communication service and the corresponding portable wireless access device and for causing said radio transceiver to employ a communication protocol stored in said memory and to employ an appropriate frequency for wireless broadcast over each communication channel to allow all of the communication services to be supplied to

the portable wireless access devices to operated (see col. 9 lines 41-67, col. 10 lines 1-65, col. 8 lines 42-51, and col. 6 lines 35-67).

Shaheen does not specifically disclose one subscriber in simultaneous communication. Kotzin teaches one subscriber in simultaneous communication (see col. 5 lines 64-67, col. 6 lines 1-40, and col. 7 lines 30-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Shaheen, and have one subscriber in simultaneous communication, as taught by Kotzin, thus allowing a soft handoff of communications between the system of different protocols, as discussed by Kotzin, (col. 2 lines 37-45, and col. 3 lines 30-37).

Consider claim 4, Shaheen discloses an inherent memory for storing a plurality of data sets allowing said radio transceiver to implement those communication protocols appropriate for supplying the respective communication services accessible by said interface circuit for wireless broadcast over the respectively assigned communication channels (see col. 9 lines 41-67 and col. 10 lines 1-20, where Shaheen discloses a base station with stored protocols therefore, and inherent memory).

***Allowable Subject Matter***

3. Claim 5 is allowed.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(6,212,390), Rune teaches a multiple protocol system.

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5. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703) 306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth, Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 customer Service Office whose telephone number is (703) 306-0377.



Nick Corsaro

**NICK CORSARO  
PATENT EXAMINER**

Primary